

REMARKS

Claims 1, 3-4 and 8-21 remain in the application. Claims 1 and 21 are in independent form.

Claim 21 has been allowed. Claims 14 and 20 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten into independent form. Claims 15-16 and 18-19 would also be allowable subject to the correction of certain Section 112, 2nd paragraph, informalities.

Claim 1 is herein amended to include limitations found in prior sub-claims 2 and 5-7, as well as other perfecting limitations, all of which are fully supported by the specification. No new matter has been added. As defined in the amended Claim 1, the subject invention comprises a shaft seal assembly 10 of a specialized type in which three separate forms of dynamic sealing features (namely a radial lip member 50, a laydown seal member 48 a felt washer 18) are all supported on a common carrier 14 so that the entire shaft seal assembly 10 forms a unitary structure that can be installed and removed as a single unit. Furthermore, the specific arrangement of the three sealing features along the carrier is particularly defined so that the laydown seal member 48 is axially interposed between the felt washer 18 and the radial lip member 50.

Claims 1, 3-6 and 8-13 stand rejected under 35 USC 102(b) as being anticipated by Karcher '479. Karcher discloses an antiquated type shaft seal assembly in which a leather laydown seal 38 is crimped in a metallic carrier 20. A felt member 70 is also crimped in the carrier 20, adjacent the leather laydown seal 38. The felt member 70 does not appear to engage the rotating portion of the seal assembly, and therefore its purpose must be assumed to be strictly that of a moisture wick and not that of a discrete sealing element. Karcher '479 fails to disclose a rubber radial lip member supported on the carrier 20. Instead, the only rubber lip seal 92 present in Karcher '479 consists of an axially mounted feature on the rotating rub ring (annular member) 32.

The entire construction of the Karcher '479 seal assembly is substantially different than that of the subject invention. Karcher does not disclose a PTFE laydown seal as in the subject invention. And quite importantly, the laydown seal is not interposed between the felt washer and a rubber radial lip member. Accordingly, in view of the substantive amendments introduced here to Claim 1, it is respectfully submitted that the rejection based on anticipation in view of Karcher '479 has been overcome.

Claims 1, 3 and 17 stand rejected under 35 USC 102(b) as being anticipated by Stearns '335. Stearns '335, another archaic seal design, discloses a formed leather lip seal 10 crimped in position within a metallic carrier. In Figure 8, an alternative embodiment includes a felt washer 66 disposed in the carrier with the leather lip seal.

Like Karcher '479, Stearns '335 also fails to disclose numerous features and arrangements of sealing components which have become significant in view of the presently amended Claim 1. Specifically, Stearns '335 fails to disclose a PTFE laydown seal. Also not disclosed is a rubber radial lip seal. Furthermore, Stearns '335 fails to disclose the specific order in which the components must be arranged within the unitary carrier, wherein the PTFE laydown seal member is axially interposed between the felt washer and the rubber radial lip member.

By contrast, the subject invention, as now clearly set forth in the amended Claim 1, requires three separate sealing elements, namely a rubber radial lip member 50, a PTFE laydown seal member 48, and an annular felt washer 18, all fixed within a common carrier 14 to form a unitized structure. Furthermore, the specific arrangement of components is significant wherein the laydown seal member 48 is axially interposed between the felt washer 18 and the rubber radial lip member 50. In view of the amended Claim 1, it is respectfully submitted that the rejection under 35 USC 102(b) based on Stearns '335 has been overcome.

Claims 2 and 7 stand rejected under 35 USC 103(a) over Karcher '479 in view of Toth et al '587.

Toth '587 discloses a unitary seal structure in which a PTFE laydown lip seal together with a rubber radial lip member are contained within a unitary metallic carrier. A foam dust excluder 386 is used on an "air side" of this seal assembly as added protection against debris infiltration for use in dusty applications. The foam dust excluder 386 is disclosed as an open cell sponge type material which is substantially different from, and used in wholly separate applications than, felt washer components as taught and claimed in the subject application.

Both Karcher '479 and Toth '587 fail to disclose specific claimed features of the subject invention. To be specific, both Karcher '479 and Toth '587 fail to disclose an annular felt washer affixed to a carrier in common operative relation with a PTFE laydown seal member and a rubber radial lip member. Furthermore, both Toth '587 and Karcher '479 fail to disclose the specific axial arrangement of components, wherein the PTFE radial lip seal is interposed between the felt washer and the rubber radial lip member. It is well settled that a *prima facie* case of obviousness requires, *inter alia*, that the prior art references teach or suggest all of the claim limitations. Because neither of the references teach or suggest two features contained in amended Claim 1, a *prima facie* case of obviousness cannot be sustained. Accordingly, it is respectfully submitted that the rejection of Claims 2 and 7 based on obviousness has been overcome.

Numerous rejections based on 35 USC 112, 2nd paragraph, have been noted in the Office Action. These rejections all arise out of insufficient antecedent basis provided for the terms "laydown seal" and "lip member" in various sub-claims. The applicant's amendments to independent Claim 1 have introduced both of these terms in proper format, and thereby provide the necessary antecedent basis for all remaining claims which depend therefrom. Accordingly, it is

respectfully submitted that each and every rejection based on 35 USC 112, 2nd paragraph, has been overcome.

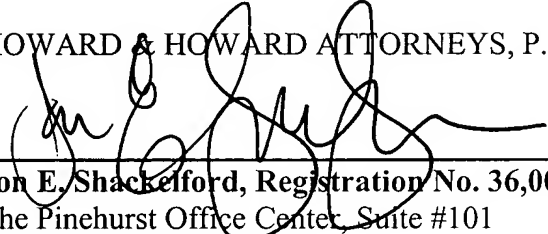
Reconsideration of this application as amended is respectfully requested.

It is believed that this application now is in condition for allowance. Further and favorable action is requested.

The Patent Office is authorized to charge or refund any fee deficiency or excess to Deposit Account No. 08-2789.

Respectfully submitted,

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